

Brian Jon Soden

Education:

June 1993	Ph. D. Geophysical Sciences University of Chicago
March 1990	M.S. Geophysical Sciences University of Chicago
May 1988	B.S. Geology (Applied Math Minor) Jay F.W. Pearson Scholarship (1984-1988), Magna Cum Laude (1988) University of Miami

Research Experience:

6/94 -	Physical Scientist, Geophysical Fluid Dynamics Laboratory, National Oceanic and Atmospheric Administration, Princeton, NJ.
7/93 - 5/94	Visiting Scientist, Atmospheric and Oceanic Sciences Program, Princeton University.
1/91 - 6/93	Honorary Fellow, Space Science and Engineering Center, University of Wisconsin - Madison.
9/90 - 6/93	NASA Global Change Fellow, Dept. of the Geophysical Sciences, University of Chicago.

Teaching Experience:

Lecturer, Atmospheric & Oceanic Sciences Program, Princeton University
AOS 427: Terrestrial and Planetary Atmospheres
AOS 527: Atmospheric Radiation
AOS 577: Weather and Climate Dynamics

Professional Activities:

Chairman, GEWEX Water Vapor Project: GVAP (2001-).
Member, USGCRP Global Water Cycle Scientific Steering Group (2002-).
Associate Editor, Journal of Geophysical Research (1999-).
Contributing Author, Intergovernmental Panel on Climate Change.
Chairman, AMS 10th Conference on Atmospheric Radiation.
Chairman, AMS Committee on Atmospheric Radiation (1998-2000).

Professional Awards:

NSC David S. Johnson Award (2001).
"For outstanding and innovative use of Earth satellite observations".

AMS Henry G. Houghton Award (2001).
"For creative and thoughtful use of observations from multiple satellites to better characterize the climate system's radiative and hydrological balances".

NOAA Outstanding Scientific Paper Award (2000).

Selected Publications:

- Soden, BJ, RT Wetherald, GL Stenchikov, and A Robock, 2002: Global cooling following the eruption of Mt. Pinatubo: A test of climate feedback by water vapor, *Science*, **296**, 727-730..
- Penner, JE and co-authors, 2002: A comparison of model- and satellite-derived aerosol optical depth and reflectivity, *J. Atmos. Sci.*, **59**, 441-460.
- Wielicki, BA and co-authors, 2002: Evidence for large decadal variability in the tropical-mean radiative energy budget, *Science*, **295**, 841-844.
- Harrison, M, A Rosati, B Soden, E Galanti, and E Tziperman, 2002: An evaluation of air-sea flux products for ENSO simulation and prediction, *Mon. Weath. Rev.*, **130**, 723-732.
- Soden, BJ, CS Velden, and RE Tuleya, 2001: The impact of satellite winds on GFDL hurricane model forecasts, *Mon. Weath. Rev.* **129**, 835-852.
- Soden, BJ, 2001: Water vapor observations, *Frontiers in the Science of Climate Modeling*, Cambridge Univ. Press., in press.
- Soden, BJ and SR Schroeder, 2000: Decadal variations in tropical water vapor: A comparison of observations and a model simulation, *J. Climate*, **13**, 3337-3341.
- Soden, BJ, 2000: Enlightening water vapour, *Nature*, **406**, 247-248.
- Held, IM and BJ Soden, 2000: Water vapor feedback and global warming, *Annu. Rev. Energy Env.*, **25**, 441-475.
- Soden, BJ, 2000: The diurnal cycle of convection, clouds and water vapor in the tropical upper troposphere, *Geophys. Res. Lett.*, **27**, 2173-2176.
- Soden, BJ, 2000: The sensitivity of the tropical hydrological cycle to ENSO, *J.Climate*, **13**, 538-549.
- Soden, BJ and co-authors, 2000: A comparison of radiation codes for retrieving upper tropospheric humidity in the 6.3 μm band: Results from the first GVAP workshop, *Bull. Amer. Meteor. Soc.*, **81**, 797-808.
- Haywood, JM, V Ramaswamy and BJ Soden, 1999: Aerosol climate forcing signatures in clear-sky satellite observations over oceans, *Science*, **283**, 1299-1303.
- Soden, BJ, 1999: How well can we monitor and predict an intensification of the hydrological cycle?, *GEWEX News*, **9**, 4-5.
- Klein, SA, BJ Soden, and NC Lau, 1999: Remote variations in SST during ENSO: Evidence for a tropical atmospheric bridge, *J. Climate*, **12**, 917-932.

- Soden, BJ, 1998: Tracking upper tropospheric water vapor: A satellite perspective, *J. Geophys. Res.*, **103**, 17069-17081.
- Soden, BJ and V Ramaswamy, 1998: Variations in atmosphere-ocean solar absorption under clear-skies: A comparison of observations and model simulations, *Geophys. Res. Lett.*, **25**, 2149-2152.
- Donner, L, C Seaman, B Soden, R Hemler and K Liou, 1997: Simulations of large-scale ice clouds in the GFDL SKYHI GCM, *J. Geophys. Res.*, **102**, 21745-21768.
- Soden, BJ, 1997: Variations in the tropical greenhouse effect during ENSO, *J. Climate*, **10**, 1050-1055.
- Spangenberg, DA, GG Mace, T P Ackerman and B J Soden, 1997: Evaluation of model-simulated upper troposphere humidity using 6.7 μm satellite observations, *J. Geophys. Res.*, **102**, 25737-25749.
- Soden, BJ and FP Bretherton, 1996: Interpretation of TOVS water vapor radiances in terms of layer-average relative humidities: Method and climatology for the upper, middle and lower troposphere, *J. Geophys. Res.*, **101**, 9333-9343.
- Chen, C-T, E Roeckner, and BJ Soden, 1996: A comparison of satellite observations and model simulations of column-integrated moisture and upper-tropospheric humidity, *J. Climate*, **9**, 1561-1585.
- Soden, BJ and JR Lanzante, 1996: An assessment of satellite and radiosonde climatologies of upper tropospheric water vapor, *J. Climate*, **9**, 1235-1250.
- Frey, RA, SA Ackerman, and BJ Soden, 1996: Climate parameters from satellite spectral radiances: Part I, *J. Climate*, **9**, 327-344.
- Soden, BJ and R Fu, 1995: A satellite analysis of deep convection, upper tropospheric humidity and the greenhouse effect, *J. Climate*, **8**, 2333-2351.
- Soden, BJ and LJ Donner, 1994: Evaluation of a GCM cirrus parameterization using satellite observations, *J. Geophys. Res.*, **99**, 14401-14413.
- Soden, BJ, SA Ackerman, D O'C. Starr, SH Melfi, and RA Ferrare, 1994: Comparison of upper tropospheric water vapor from GOES, Raman lidar, and CLASS measurements, *J. Geophys. Res.*, **99**, 21005-21016.
- Soden, BJ and FP Bretherton, 1994: Evaluation of the water vapor distribution in general circulation models using satellite observations, *J. Geophys. Res.*, **99**, 1187-1210.
- Soden, BJ and FP Bretherton, 1993: Upper tropospheric relative humidity from the GOES 6.7 μm channel: method and climatology for July 1987, *J. Geophys. Res.*, **98**, 16669 -16688.

Soden, BJ, 1992: Evaluation of cloud radiative forcing from the NCAR CCM
and ERBE observations, *J. Geophys. Res.*, **97**, 18137-18159.